



NEW REPORT REVEALS HOW ROLLOUT OF GIGABIT BROADBAND IS SET TO TRANSFORM LIVES ACROSS EUROPE

Leading Economists say Next-Generation Networks will Bring About Major Benefits to Society

Healthcare Advances Enabled by Gigabit Speeds Could Significantly Improve Patients' Lives and Save Thousands of Euros per Person per Year

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A new report by the respected economists, Oxera, has revealed how widespread access to internet speeds of at least 1 Gigabit per second will lead to transformative changes in the way people across Europe interact, socialize, work and stay healthy.

The report, commissioned by the leading converged video, broadband and communications company, Liberty Global, details four key areas in which the mass market rollout of Gigabit broadband has the potential to dramatically improve lives: healthcare, commuting, social interaction and the environment.

It predicts that many social and economic benefits will result from the widespread rollout of Gigabit broadband, as increased connectivity changes the way people interact with each other by reducing frictions, which economists refer to as "transaction costs".

Manuel Kohnstamm, Senior Vice President and Chief Corporate Affairs Officer for Liberty Global, said: "The expansion of Gigabit speeds at scale across Europe is essential to the growth of the economy and improvement of our daily lives, and the possibilities that lie ahead with the next generation of broadband are truly exciting. This report demonstrates how many areas of our lives could benefit, from cutting edge technology and advances in communications, to helping reduce CO2 emissions. And Gigabit speeds are just the start – Liberty Global's network that is already in the ground across the continent will deliver speeds up to ten times faster, opening up a world of limitless innovation."

PRESS RELEASE



Oxera's investigation reveals that healthcare practices could benefit considerably from the increasing availability of Gigabit speeds. It cites estimates from Eurostat, the statistical office of the European Union, that 179 million people within the EU have medical care needs that haven't been addressed, with a quarter saying it was due to a lack of time and a third saying cost was an issue.

In such cases, Gigabit broadband enables applications such as diagnostics-quality video streaming and sharing, which could allow remote consultations, improving the chances of early diagnosis and reducing costs and the need to travel. 24-hour stroke monitoring in the home could also improve outcomes and save up to €35k per patient per year.¹

The report also investigates how next-generation networks will change working habits, finding that the number of employees who mainly work from home is only 6%, and that the majority of workers still spend between 263 hours (The Netherlands) and 358 hours (UK) commuting per year.

Gigabit broadband enables applications such as holographic conferencing and augmented reality presence, which means professionals can collaborate without having to travel. Oxera estimates that commuters could save between €1,651 (Poland) and €5,380 (Ireland) travelling each year.

Alongside healthcare and work, social interactions could be improved considerably with Gigabit broadband. More realistic remote interactions with friends and family through VR and holographic presence will help alleviate loneliness and isolation. Additionally, Gigabit broadband can help people overcome physical or geographical limitations to enjoy immersive experiences of live sporting or community events.

The report also reveals how Gigabit broadband can help in the fight against climate change. With average annual emissions from commuting ranging from 1.2m tonnes per year (Ireland) at the lowest end to 19m tonnes per year (Germany) at the highest, making more connections virtually rather than physically can reduce carbon emissions from transport. Opportunities also exist in VR learning, VR tourism and home working to substantially reduce carbon emissions from travel.

David Jevons, Partner at Oxera, said: "Connectivity is a critical enabler at the heart of digital transformation. Gigabit-capable networks can help reduce the transaction costs that our report identifies, powering the applications that unlock benefits across society. The internet has changed the way we live, and the advent of widespread Gigabit speeds will once again bring transformative changes to our lives."

¹ Cost savings for each stroke patient treated by the HS Cumbria and Lancashire Cardiac and Stroke Network's on-demand telemedicine programme in the UK, which requires stable, high-speed broadband connections.

PRESS RELEASE



Oxera's findings come as Liberty Global continues its rollout of "GIGACities" across Europe, making Gigabit speeds available to millions of customers. In the past few months alone, its operating companies have switched on Gigabit broadband throughout Switzerland, Brussels and Flanders in Belgium, Utrecht in the Netherlands, as well as Southampton and Manchester in the UK.

Those rollouts follow 12 Polish cities, including Warsaw, Kraków and Gdańsk, and three cities in Slovakia, where Liberty Global has made Gigabit connections available at scale. More GIGACities are set to launch in the coming months and throughout 2020, as Liberty Global continues to lead the next-generation broadband revolution across Europe.

To find out more, go to: https://www.libertyglobal.com/oxera-report

ABOUT LIBERTY GLOBAL

Liberty Global (NASDAQ: LBTYA, LBTYB and LBTYK) is one of the world's leading converged video, broadband and communications companies, with operations in 6 European countries under the consumer brands Virgin Media, Telenet and UPC. We invest in the infrastructure and digital platforms that empower our customers to make the most of the digital revolution.

Our substantial scale and commitment to innovation enable us to develop market-leading products delivered through next-generation networks that connect 11 million customers subscribing to 25 million TV, broadband internet and telephony services. We also serve 6 million mobile subscribers and offer WiFi service through millions of access points across our footprint.

In addition, Liberty Global owns 50% of VodafoneZiggo, a joint venture in the Netherlands with 4 million customers subscribing to 10 million fixed-line and 5 million mobile services, as well as significant investments in ITV, All3Media, ITI Neovision, LionsGate, the Formula E racing series and several regional sports networks.

For more information, please visit www.libertyglobal.com or contact:

Investor Relations:

Matt Coates +44 20 8483 6333 John Rea +1 303 220 4238 Stefan Halters +44 20 8483 6211 **Corporate Communications:**

Bill Myers +1 303 220 6686 Matt Beake +44 20 8483 6428